OHIO DEPARTMENT OF HEALTH

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John R. Kasich / Governor

Theodore E. Wymyslo, M.D. / Director of Health

June 14, 2013

Steven Renninger, On-Scene Coordinator
U.S. Environmental Protection Agency
Emergency Response Branch
26 West Martin Luther King Drive (G41)
Cincinnati, OH 45268

Dear Steve:

The Health Assessment Section of the Ohio Department of Health is providing screening levels and action levels for the contaminants of concern in indoor air and sub-slab soil gas for properties at the Valley Pike VOC site (aka Mullins Rubber Products, Inc. site), Riverside, Montgomery County, Ohio.

The values listed in the tables are expressed in micrograms per cubic meter ($\mu g/m^3$) and parts per billion (ppb). We prefer the use of ppb, as we believe it is more easily understood by the general public. Based on the Region 5 vapor intrusion guidance, we are giving you both screening levels and action levels for assessing vapor intrusion sites:

Screening Levels are based on 10^{-5} cancer risk or hazard index of 1.0. Screening levels represent concentrations of a substance that are unlikely to cause harmful (adverse) health effects in exposed people. Detections in indoor air below these levels are not of a health concern.

Action Levels are based on 10^{-4} cancer risk and hazard index of 10. Detections in indoor air that exceed this level would lead to a recommendation for actions to reduce exposure in a relatively short period of time.

Also included are corresponding values for non-residential buildings – spaces that are not used for residences or where children are not continuously present. Non-residential buildings include commercial businesses and public buildings, churches, non-manufacturing businesses, and industries where these chemicals are not used as part of the manufacturing process. The non-residential screening levels were derived by adjusting the residential values by a factor of 4.2 to adjust from a 168-hour week for the residential exposure to a 40-hour work week for the non-residential exposure. The sub-slab soil gas levels were derived by adjusting the indoor air values using an attenuation factor of 0.1. For industrial settings were the chemicals in question are used, OSHA permissible exposure limits or other occupational exposure values would apply.

If you have any questions regarding these values, please contact John Kollman in my program at (614) 752-8335.

Thank you.

Sincerely,

Robert Frey, PhD
Chief, Health Assessment Section, Ohio Department of Health

RF/jk

Table 1. Screening and Action Levels – Valley Pike VOC site, Ohio

Chemical of Concern	*Residential*		*Source*	*Non-residential*		*Source*
	µg/m³	*ppb*		*µg/m³*	*ppb*	
Screening Levels *Indoor Air*						
PCE	40	6	RfC	170	25	RfC x 4.2
TCE	2	0.4	RfC	10	2	RfC x 4.2
Sub-slab Soil Gas						
PCE	400	60	RfC x 10	1,700	250	RfC x 10 x 4.2
TCE	20	4	RfC x 10	100	20	RfC x 10 x 4.2
Action Levels *Indoor Air*						
PCE	400	60	RfC x 10	1,700	250	RfC x 10 x 4.2
TCE	20	4	RfC x 10	100	20	RfC x 10 x 4.2
Sub-slab Soil Gas						
PCE	4,000	600	RfC x 10 x 10	17,000	2,500	RfC x 10 x 10 x 4.2
TCE	200	40	RfC x 10 x 10	1,000	200	RfC x 10 x 10 x 4.2

PCE = tetrachloroethylene
TCE = trichloroethylene
$\mu g/m^3$ = micrograms per cubic meter
ppb = parts per billion
RfC = reference concentration (EPA)